

Optimized Blocking Impurity Placement for SiGe HBTs

Abstract of the Disclosure

A high performance SiGe HBT that has a SiGe layer with a peak Ge concentration of at least approximately 20% and a boron-doped base region formed therein having a thickness. The base region includes diffusion-limiting impurities substantially throughout its thickness, at a peak concentration below that of boron in the base region. Both the base region and the diffusion-limiting impurities are positioned relative to a peak concentration of Ge in the SiGe layer so as to optimize both performance and yield.

Figures

Figure 1: A line graph showing the relationship between the number of people in a household and the number of people in a household. The x-axis is labeled 'Number of people in a household' and ranges from 0 to 10. The y-axis is labeled 'Number of people in a household' and ranges from 0 to 10. The graph shows a positive linear relationship, with the line passing through the origin (0,0) and the point (10,10). The line is labeled 'y = x'.